I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, Fax No. 1-571-273-8300 on February 24, 2006.

Kim Blum — Kim Blum
Name (Print) Signature

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: HABECKER et al.	)	Examiner: Daniel J. Jenkins
Application No.: 10/795,968	)	Group Art Unit: 1742
Filed: March 8, 2004	)	Confirmation No.: 8631
Docket No.: 99066CON2 (3600-198-02)	)	

For: HIGH CAPACITANCE NIOBIUM POWDERS AND ELECTROLYTIC CAPACITOR ANODES

DECLARATION UNDER 37 C.F.R. § 1.132

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

February 24, 2006

Sir:

I, Heather Enman, do declare and state as follows:

(1) I am currently employed with Cabot Corporation, and have been working in the niobium powder area, doing research and product development since January 2001.

(2) I have a bachelor's and master's degree in Chemical Engineering from Rutgers University.

(3) I am familiar with the Office Action dated September 26, 2005, received in the examination of U.S. Patent Application No. 10/795,968. I am also familiar with the cited references relied upon by the Examiner.

(4) In order to show that the powders of Chang (U.S. Patent No. 5,448,447), in particular, niobium powders having a BET around 0.55 m^2/g would not have the capacitance set forth in claim 36 of the present application, experiments were uncovered to show the capacitance

achieved by similar powders under similar conditions. These experiments were done by me in the past, or under my direct supervision.

(5) As can be seen by the attached data, Table 1, a Nb powder having a BET of 0.58 m^2/g when formed at a formation voltage of 35 volts at a formation temperature of 60° C, and at a sinter temperature of 1,300° C, for a sinter time of 10 minutes, had a capacitance of 26,286 CV/g. Furthermore, as shown on the attached graph, the affects of sintering temperature can be extrapolated to show that a capacitance of 26,286 CV/g can be extrapolated to a capacitance of about 40,000 CV/g for a sinter temperature of 1,100°. In making this graph, I have assumed a linear relationship, which is a reasonable assumption, and the resulting capacitance for the 0.58 m^2/g BET sample would be about 40,000 CV/g at 1,100° C. This is significantly below the 65,000 CV/g stated in claim 36. Even if a fair degree of non-linearity exists in the CV/g–sintered temperature relationship, the capacitance for the 0.58 m^2/g BET sample would still be below 65,000 CV/g in my opinion based on my work in the niobium powder area.

(6) Accordingly, it is in my opinion that the powders of Chang, with respect to niobium powders, would not be capable of the electrical characteristics set forth on claim 36 of the present application.

(7) I hereby declare that all statement made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

U.S. Patent Application No. 10/795,968
Declaration Under 37 C.F.R. § 1.132
Reply to Office Action of September 26, 2005

2/20/06
Date

Heather Enman
Heather Enman

Attachment I: Experiments -- Graph

Niobium Metal Samples

Notebook ID	BET (m2/g)	Press Density (g/cc)	Formation Voltage	Formation Temp (C)	Sinter Temp (C)	Sinter Time (min)	CV/g	nA/CV
8656-85-E	0.58	3.0	35	60	1400	10	19781	0.49
8656-85-E	0.58	3.0	35	60	1300	10	26286	0.78
8656-89-270SH	0.71	3.0	35	60	1300	10	26225	2.49
8656-89-270SAH	0.65	3.0	35	60	1300	10	24038	0.98

Formation
Current Density 50mA/g
35V Ef @ 60 Deg C./0.1% H3PO4 Electrolyte

DC Leakage Testing
70% Ef (24.5 VDC) Test Voltage
60 second charge time
10% H3PO4 @ 21 Deg C.

Capacitance Testing:
18% H2SO4 @ 21 Deg C.
120 Hz

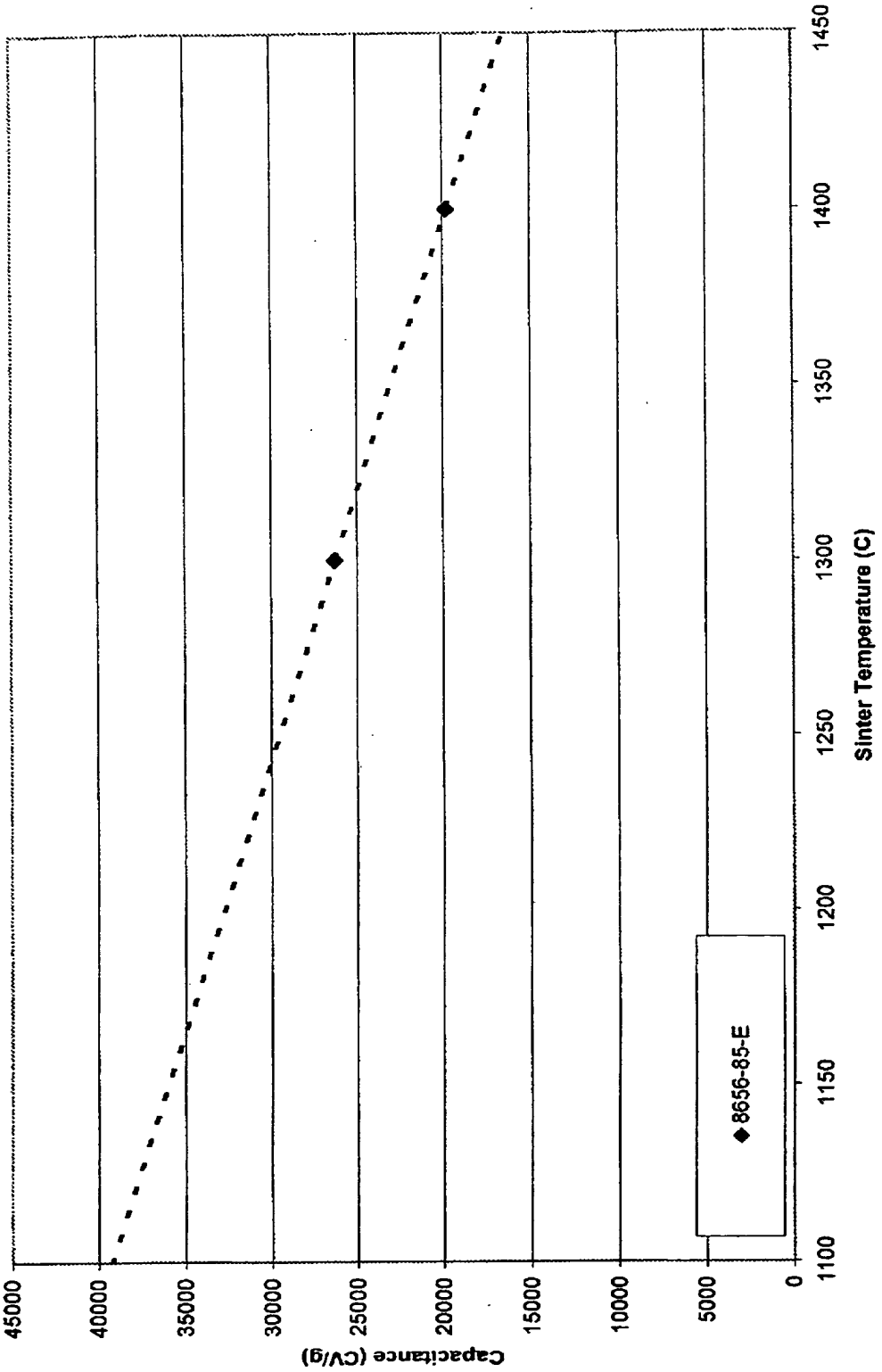

Figure 1: Capacitance Change with Sinter Temperature